

Project to Collect Medical Near-Miss/  
Adverse Event Information

# Medical Safety Information

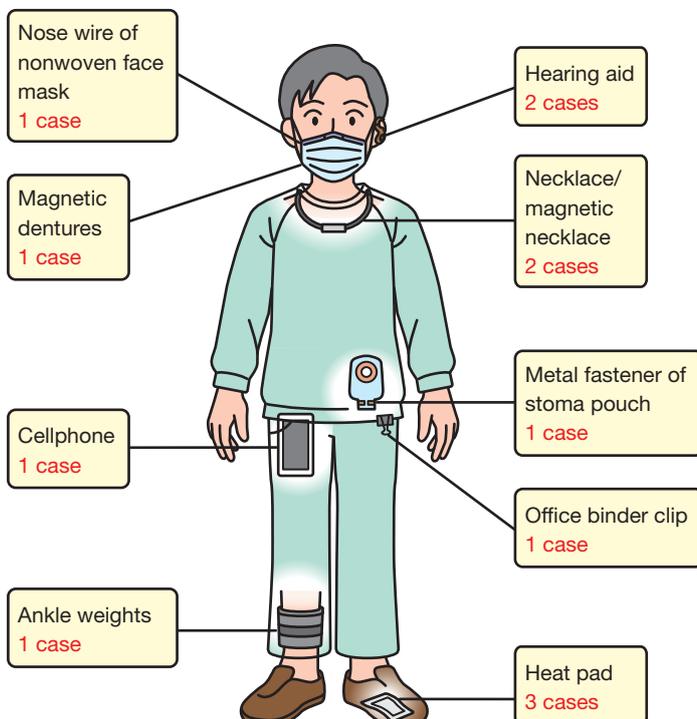
No.198, May 2023

## Magnetic Material (e.g. Metal Products) Taken in the MRI Room (2nd Follow-up Report)

Warnings about magnetic material (e.g. metal products) taken in the MRI room were provided in Medical Safety Information No.10 (September 2007) and No.94 (September 2014). Similar events have subsequently been reported, including 13 cases in which the patient entered the MRI room with magnetic material still on their person, despite medical personnel having checked for the presence of metal products or other magnetic material (information collection period: from August 1, 2014 to March 31, 2023). This information was compiled on the basis of the content featured in Recurrence of Events and Occurrence of Similar Events section of the 66th Quarterly Report.

**Cases have been reported in which the patient entered the MRI room with magnetic material still on their person, despite medical personnel having checked for the presence of metal products or other magnetic material.**

### Image of case



### Main Background Factors

When asked by the radiological technologist whether they had any metal items, the patient did not mention their hearing aid, as they did not realize it was made of metal

The radiological technologist checked the patient's mask and handed them one without a nose wire, but the patient did not change their mask

When the nurse checked whether the patient had any magnetic material, the patient did not mention their magnetic necklace, as they were not aware it was something they could not take into the MRI room

When the radiological technologist checked whether the patient had any magnetic material, the patient did not mention their ankle weights, as they had forgotten they were wearing them

When the radiological technologist and the nurse checked whether the patient was wearing a compress or heat pad, the patient replied that they were not, as they had forgotten they were wearing a heat pad

## Magnetic Material (e.g. Metal Products) Taken in the MRI Room (2nd Follow-up Report)

### Case 1

The nurse used a medical questionnaire to check whether the patient, who was to undergo an MRI examination, had any magnetic material. The patient did not mention their magnetic necklace, as they were not aware it was something they could not take into the MRI room. The patient was wearing a t-shirt under their examination gown. The radiological technologist checked the patient's entire body with a metal detector, which did not react, so they allowed the patient into the MRI room. The moment the patient laid down on the MRI examination table in a supine position, the magnetic necklace they were wearing flew off and stuck to the MRI machine. The patient was uninjured and the examination proceeded as planned once the magnetic necklace was removed from the device.

### Case 2

Before the patient entered the MRI room, the radiological technologist and the nurse used a medical questionnaire to check whether the patient was wearing any metal items about their person. As part of this process, they asked the patient whether they were wearing anything like a compress or heat pad, to which the patient replied that they were not. However, the patient had forgotten that they were wearing heat pads on the soles of their feet. The patient was allowed to enter the MRI room, but when they lay down on the examination table, the radiological technologist discovered heat pads attached to the soles of the patient's feet.

The Japan Medical Imaging and Radiological Systems Industries Association has published a pre-entry checklist for use before entering the MRI room.

[https://www.jira-net.or.jp/anzenkanri/02\\_seizouhanbaigo/file/mr\\_checklist\\_v2\\_eng.pdf](https://www.jira-net.or.jp/anzenkanri/02_seizouhanbaigo/file/mr_checklist_v2_eng.pdf)

#### Preventive measures taken at the medical institutions in which the events occurred

- Prepare a document with photographs or illustrations of items that cannot be taken into the MRI room and show it to the patient while specifically checking each item.

The measure above is an example. Please consider initiatives suitable for your own facility.

\* As part of the Project to Collect Medical Near-Miss/Adverse Event Information (a Ministry of Health, Labour and Welfare grant project), this medical safety information was prepared based on the cases collected in the Project as well as on opinions of the "Comprehensive Evaluation Panel" to prevent the occurrence and recurrence of medical adverse events. See the Project website for details.

<https://www.med-safe.jp/>

\* Accuracy of information was ensured at the time of preparation but cannot be guaranteed in the future.

\* This information is intended neither to limit the discretion of healthcare providers nor to impose certain obligations or responsibilities on them.

